# Annals of Medicine

**Volume 28, 1996**

Editor-in-Chief
Petri T. Kovanen

Associate Editor
Pekka Leinonen

## INDEX

**Published for the Finnish Medical Society DUODECIM
by Blackwell Science Ltd, Oxford.**

**Editorial Office:**
***Annals of Medicine***
The Finnish Medical Society DUODECIM
PO Box 713 (Kalevankatu 11 A)
FIN-00101 Helsinki
FINLAND
Tel: +358 9 618 851
Fax: +358 9 6188 5200

Blackwell
Science

## Number 1

### Editorials

David B. Wilson
**Transcription Factors: Regulators of Gene Expression in Normal and Pathological States** ..... 1

Leif B. Andersson
**Genes and Obesity** ..... 5

### Review Article

Liisa Aine
**Coeliac-type Permanent-tooth Enamel Defects** ..... 9

### Trends in Clinical Practice

Alex Vermeulen
**Decreased Androgen Levels and Obesity in Men** ..... 13

Jouko Suonpää
**Treatment of Allergic Rhinitis** ..... CME 17

Terho Heikkinen and Olli Ruuskanen
**New Prospects in the Prevention of Otitis Media*** ..... 23

Joseph W. St. Geme III
**Progress towards a Vaccine for Nontypable *Haemophilus influenzae**** ..... 31

### Trends in Molecular Medicine

Barton F. Haynes, Shannon B. Putman and Jason B. Weinberg
**Update on the Issues of HIV Vaccine Development*** ..... CME 39

Ali I. Fattom and Robert Naso
**Staphylococcal Vaccines: A Realistic Dream*** ..... CME 43

Jörg Bungert and James Douglas Engel
**The Role of Transcription Factors in Erythroid Development** ..... 47

Eero Niskanen
**Autologous Stem Cell Transplantation in the Treatment of Cancer** ..... 57

Pirjo Inki and Markku Jalkanen
**The Role of Syndecan-1 in Malignancies** ..... 63

### Original Article

Olavi Kiekara, Matti Korppi, Seppo Tanska and Seppo Soimakallio
**Radiological Diagnosis of Pneumonia in Children** ..... 69

### Brief Report

Matti Luotolahti, Markku Saraste and Jaakko Hartiala
**Exercise Echocardiography in the Diagnosis of Coronary Artery Disease** ..... 73

*These articles were published in connection with the worldwide theme *'Emerging and Re-emerging* Global Microbial Threats' co-ordinated by the American Medical Association.

## Number 2


### Editorial

Kari Remes and Allan Rajamäki
**Autologous Stem Cell Transplantations** ..... 79

### Review Articles

Tapio Rytömaa
**Ten Years after Chernobyl** ..... 83

Seppo Ylä-Herttuala
**Gene Therapy for Cardiovascular Diseases** ..... CME 89

Arto Sivula and Risto Pelkonen
**Long-term Health Risk of Primary Hyperparathyroidism: The Effect of Surgery** ... CME 95

Aarno Palotie, Mervi Heiskanen, Maris Laan and Nina Horelli-Kuitunen
**High-resolution Fluorescence *In Situ* Hybridization: A New Approach in Genome Mapping** ..... 101

### Trends in Clinical Practice

Hans Jørgen Nielsen
**Histamine-2 Receptor Antagonists as Immunomodulators: New Therapeutic Views?** ..... 107

Wilhelm Friedrich
**Bone Marrow Transplantation in Immunodeficiency Diseases** ..... 115

### Trends in molecular Medicine

Zeynep Tümer and Nina Horn
**Menkes Disease: Recent Advances and New Insights into Copper Metabolism** .... 121

### Original Article

Pertti Kirkinen, Kaarina Partanen, Pauli Vainio and Markku Ryynänen
**MRI in Obstetrics: A Supplementary Method for Ultrasonography** ..... 131

### Special Section: Autologous Stem Cell Transplantations in Solid Tumours
Guest Editor: Kari Remes

Elisabeth A. Vandenberghe and Anthony H. Goldstone
**Autologous Stem Cell Transplants in Lymphomas** ..... 137

Heikki Joensuu
**Autologous Stem Cell Transplantation in Breast Cancer** ..... 145

Seija E. Grénman, Virpi T. Rantanen and Tuula A. Salmi
**High-dose Chemotherapy with Autologous Stem Cell Support in Advanced Ovarian Cancer** ..... 151

Ayad Atra and C. Ross Pinkerton
**Autologous Stem Cell Transplantation in Solid Tumours of Childhood** ..... 159

Gunnar Kvalheim
**Purging of Autografts: Methods and Clinical Significance** ..... 167

Klaas Hoekman and Jan B. Vermorken
**Incidence and Prevention of Nonhaematological Toxicity of High-dose Chemotherapy** ..... 175

## Number 3

### Editorials


Thomas E. Carey
**Field Cancerization: Are Multiple Primary Cancers Monoclonal or Polyclonal?** ..... 183

Wade H. Berrettini and Petra H. Pekkarinen
**Molecular Genetics of Bipolar Disorder** ..... 191


### Review Articles


Mikko Salaspuro
**Bacteriocolonic Pathway for Ethanol Oxidation: Characteristics and Implications** ..... CME 195

Eric J. Brown and Frederik P. Lindberg
**Leucocyte Adhesion Molecules in Host Defence against Infection** ..... 201


### Trends in Clinical Practice


Deborah S. Hartman and Olivier Civelli
**Molecular Attributes of Dopamine Receptors: New Potential for Antipsychotic Drug Development** ..... CME 211

Cecelia M. McCarton, Ian F. Wallace and Forrest C. Bennett
**Early Intervention for Low-birth-weight Premature Infants: What Can We Achieve?** ..... 221

Kirsti Villikka and Seppo Pyrhönen
**Cytokine Therapy of Malignant Melanoma** ..... 227

Hans-Jürgen Christen
**Lyme Neuroborreliosis in Children** ..... 235


### Trends in Molecular Medicine


Torvard C. Laurent, Ulla B. G. Laurent and J. Robert E. Fraser
**Serum Hyaluronan as a Disease Marker** ..... CME 241

John Hardy
**New Insights into the Genetics of Alzheimer's Disease** ..... 255


### Original Articles


Olli T. Raitakari, Simo Taimela, Kimmo V. K. Porkka and Jorma S. A. Viikari
**Effect of Leisure-time Physical Activity Change on High-density Lipoprotein Cholesterol in Adolescents and Young Adults** ..... 259

Jan K. Lacki, Wieslawa Porawska, Urszula Mackiewicz, Stefan Mackiewicz and Wolfgang Müller
**Changes in Agalactosyl IgG Levels Correlate with Radiological Progression in Early Rheumatoid Arthritis** ..... 265

## Number 4


### Editorial

Fionula M. Brennan
**Transgenic Models for Arthritis: Useful Clues to Be Gained?** ..... 271

### Review Article

Maria C. Backström, Anna-Leena Kuusela and Ritva Mäki
**Metabolic Bone Disease of Prematurity** ..... 275

### Trends in Clinical Practice

Marja Hietarinta and Olli Lassila
**Clinical Significance of Antinuclear Antibodies in Systemic Rheumatic Diseases** ..... 283

Maurie Markman
**Intraperitoneal Chemotherapy in the Treatment of Ovarian Cancer** ..... 293

### Trends in Molecular Medicine

Paul Matthews and Ian O. Ellis
**Use of Immunocytochemistry in the Diagnosis of Metastatic Carcinoma** ..... CME 297

Miikka Vikkula and Björn R. Olsen
**Unravelling the Molecular Genetics of Osteoarthrosis** ..... CME 301

### Original Articles

Jarmo A. Salo, Eero O. Kivilaakso, Tuula A. Kiviluoto and Ismo O. Virtanen
**Cytokeratin Profile Suggests Metaplastic Epithelial Transformation in Barrett's Oesophagus** ..... 305

Hanna Mäenpää, Carl Blomqvist, Tom Wiklund, Timo Lehtonen and Inkeri Elomaa
**Results of Treatment in Testicular Nonseminoma** ..... 311

### Special Section: Diabetes and Atherosclerosis
### Proceedings of the XI Paavo Nurmi Symposium, Part I
Guest Editors: Markku Laakso and Kalevi Pyörälä

Markku Laakso and Kalevi Pyörälä
**Preface to the Special Section: *Diabetes and Atherosclerosis*** ..... 317

John H. Fuller, Lynda K. Stevens and Shi-Li Wang
**International Variations in Cardiovascular Mortality Associated with Diabetes Mellitus: The WHO Multinational Study of Vascular Disease in Diabetes** ..... 319

Trevor J. Orchard
**The Impact of Gender and General Risk Factors on the Occurrence of Atherosclerotic Vascular Disease in Non-insulin-dependent Diabetes Mellitus** ..... 323

Marja-Riitta Taskinen, Sanni Lahdenperä and Mikko Syvänne
**New Insights into Lipid Metabolism in Non-insulin-dependent Diabetes Mellitus** ..... 335

Markku Laakso
**Lipids and Lipoproteins as Risk Factors for Coronary Heart Disease in Non-insulin-dependent Diabetes Mellitus** ..... 341

Maria F. Lopes-Virella and Gabriel Virella
**Modified Lipoproteins, Cytokines and Macrovascular Disease in Non-insulin dependent Diabetes Mellitus** ..... 347

Kalevi Pyörälä and George Steiner
**Will Correction of Dyslipoproteinaemia Reduce Coronary Heart Disease Risk in Patients with Non-insulin-dependent Diabetes? Need for Trial Evidence** ..... 357

Steven M. Haffner
**Cardiovascular Risk Factors and the Prediabetic Syndrome** ..... 363

Irène Juhan-Vague, Marie Christine Alessi and Philippe Vague
**Thrombogenic and Fibrinolytic Factors and Cardiovascular Risk in Non-insulin-dependent Diabetes Mellitus** ..... 371

## Number 5


### Review Article

Kari Poikolainen
**Alcohol and Overall Health Outcomes** ..... 381

### Trends in Clinical Practice

David H. Perlmutter
**Alpha-1-antitrypsin Deficiency: Biochemistry and Clinical Manifestations** .....CME 385

Sigurdur Kristjánsson, Inga-Lisa Strannegård and Göran Wennergren
**Inflammatory Markers in Childhood Asthma** ..... 395

### Original Article

Terry C. Lairmore, Margaret M. Frisella and Samuel A. Wells Jr
**Genetic Testing and Early Thyroidectomy for Inherited Medullary Thyroid Carcinoma** ..... 401

### Case Report

Gautam Phookan, Ralph A. W. Lehman and Keith R. Kuhlengel
**Cervical Spinal Epidural Haematoma: The Double Jeopardy** ..... 407

### Special Section: Diabetes and Atherosclerosis
### Proceedings of the XI Paavo Nurmi Symposium, Part II
Guest Editors: Markku Laakso and Kalevi Pyörälä

Markku Laakso and Johanna Kuusisto
**Epidemiological Evidence for the Association of Hyperglycaemia and Atherosclerotic Vascular Disease in Non-insulin-dependent Diabetes Mellitus** .... 415

Helen Vlassara
**Advanced Glycation End-products and Atherosclerosis** ..... 419

George L. King
**The Role of Hyperglycaemia and Hyperinsulinaemia in Causing Vascular Dysfunction in Diabetes** ..... 427

John S. Yudkin
**Hyperinsulinaemia, Insulin Resistance, Microalbuminuria and the Risk of Coronary Heart Disease** ..... 433

Robert C. Turner and Rury R. Holman on behalf of the UK Prospective Diabetes Study Group
**The UK Prospective Diabetes Study** ..... 439

Matti I. J. Uusitupa
**Early Lifestyle Intervention in Patients with Non-insulin-dependent Diabetes Mellitus and Impaired Glucose Tolerance** ..... 445

Eric Boerwinkle
**A Contemporary Research Paradigm for the Genetic Analysis of a Common Chronic Disease** ..... 451

Melissa A. Austin
**Genetic Epidemiology of Dyslipidaemia and Atherosclerosis** ..... 459

François Cambien
**Insight into the Genetic Epidemiology of Coronary Heart Disease** ..... 465

## Number 6

### Review Article

Willemien J. van Driel, Maaike E. Ressing, Remco M. P. Brandt, René E. M. Toes, Gert Jan Fleuren, J. Baptist Trimbos, W. Martin Kast and Cees J. M. Melief
**The Current Status of Therapeutic HPV Vaccine** ..... 471

### Trends in Clinical Practice

James M. Church
**Prophylactic Colectomy in Patients with Hereditary Nonpolyposis Colorectal Cancer** ..... 479

Ari K. Leppäniemi and David C. Elliott
**The Role of Laparoscopy in Blunt Abdominal Trauma** ..... 483

### Trends in Molecular Medicine

Malcolm K. Brenner
**Gene Transfer in Haematological Malignancy** ..... CME 491

Gabriele Grassi and Joan C. Marini
**Ribozymes: Structure, Function and Potential Therapy for Dominant Genetic Disorders** ..... 499

Harri Lönnberg and Eero Vuorio
**Towards Genomic Drug Therapy with Antisense Oligonucleotides** ..... 511

### Special Section: Schizophrenia

Guest Editor: Jouko Lönnqvist

Michael Flaum and Susan K. Schultz
**The Core Symptoms of Schizophrenia** ..... 525

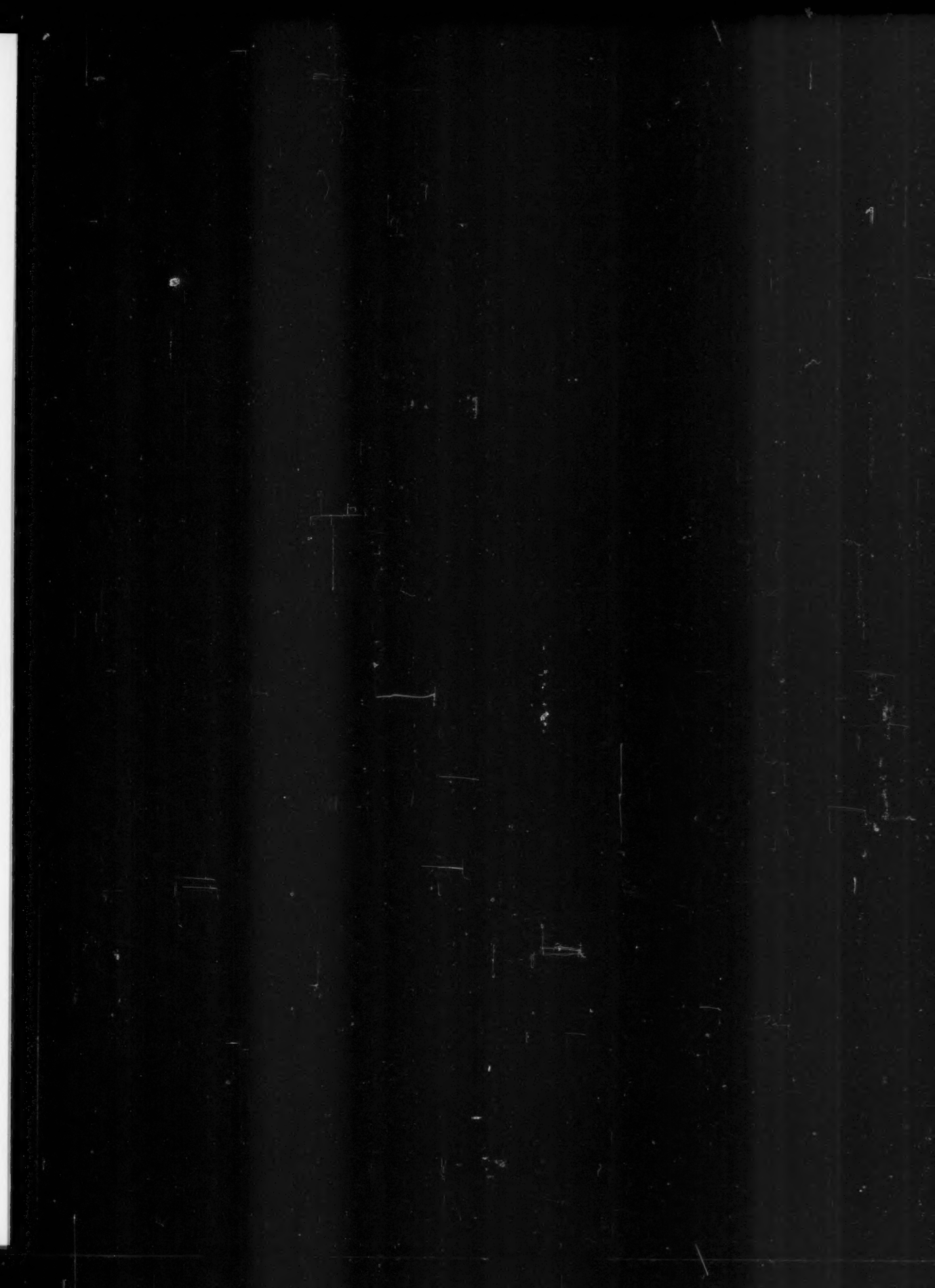
Tyrone D. Cannon
**Abnormalities of Brain Structure and Function in Schizophrenia: Implications for Aetiology in Pathophysiology** ..... 533

Michael C. O'Donovan and Michael J. Owen
**The Molecular Genetics of Schizophrenia** ..... 541

Siew E. Chua and Robin M. Murray
**The Nerodevelopmental Theory of Schizophrenia: Evidence Concerning Structure and Neuropsychology** ..... CME 547

Jarmo Hietala and Erkka Syvälahti
**Dopamine in Schizophrenia** ..... 557

# Author Index


Aine Liisa ..... 9
Alessi Marie Christine ..... 371
Andersson Leif B ..... 5
Atra Ayad ..... 159
Austin Melissa A ..... 459
Backström Maria C ..... 275
Bennett Forrest C ..... 221
Berrettini Wade H ..... 191
Blomqvist Carl ..... 311
Boerwinkle Eric ..... 451
Brandt Remco MP ..... 471
Brennan Fionula M ..... 271
Brenner Malcolm K ..... 491
Brown Eric J ..... 201
Bungert Jörg ..... 47
Cambien François ..... 465
Cannon Tyrone D ..... 533
Carey Thomas E ..... 183
Christen Hans-Jürgen ..... 235
Chua Siew E ..... 547
Church James M ..... 479
Civelli Olivier ..... 211
Driel Willemien J van ..... 471
Elliott David C ..... 483
Ellis Ian O ..... 297
Elomaa Inkeri ..... 311
Engel James Douglas ..... 47
Fattom Ali I ..... 43
Flaum Michael ..... 525
Fleuren Gert Jan ..... 471
Fraser J Robert E ..... 241
Friedrich Wilhelm ..... 115
Frisella Margaret M ..... 401
Fuller John H ..... 319
Goldstone Anthony H ..... 137
Grassi Gabriele ..... 499
Grénman Seija E ..... 151
Haffner Steven M ..... 363
Hardy John ..... 255
Hartiala Jaakko ..... 73
Hartman Deborah S ..... 211
Haynes Barton F ..... 39
Heikkinen Terho ..... 23
Heiskanen Mervi ..... 101
Hietala Jarmo ..... 557
Hietarinta Marja ..... 283
Hoekman Klaas ..... 175
Holman Rury R ..... 439
Horelli-Kuitunen Nina ..... 101
Horn Nina ..... 121
Inki Pirjo ..... 63
Jalkanen Markku ..... 63
Joensuu Heikki ..... 145
Juhan-Vague Irène ..... 371
Kast W Martin ..... 471
Kiekara Olavi ..... 69
King George L ..... 427
Kirkinen Pertti ..... 131
Kivilaakso Eero O ..... 305
Kiviluoto Tuula A ..... 305
Korppi Matti ..... 69
Kristjánsson Sigurdur ..... 395
Kuhlengel Keith R ..... 407
Kuusela Anna-Leena ..... 275
Kuusisto Johanna ..... 415
Kvalheim Gunnar ..... 167
Laakso Markku ..... 317, 341, 415
Laan Maris ..... 101
Lacki Jan K ..... 265
Lahdenperä Sanni ..... 335
Lairmore Terry C ..... 401
Lassila Olli ..... 283
Laurent Torvard C ..... 241
Laurent Ulla BG ..... 241
Lehman Ralph AW ..... 407
Lehtonen Timo ..... 311
Leppäniemi Ari K ..... 483
Lindberg Frederik P ..... 201
Lönnberg Harri ..... 511
Lopes-Virella Maria F ..... 347
Luotolahti Matti ..... 73
Mackiewicz Stefan ..... 265
Mackiewicz Urszula ..... 265
Mäenpää Hanna ..... 311
Mäki Ritva ..... 275
Marini Joan C ..... 499
Markman Maurie ..... 293
Matthews Paul ..... 297
McCarton Cecelia M ..... 221
Melief Cees JM ..... 471
Müller Wolfgang ..... 265
Murray Robin M ..... 547
Naso Robert ..... 43
Nielsen Hans Jørgen ..... 107
Niskanen Eero ..... 57
O'Donovan Michael C ..... 541
Olsen Björn R ..... 301
Orchard Trevor J ..... 323
Owen Michael J ..... 541
Palotie Aarno ..... 101
Partanen Kaarina ..... 131
Pekkarinen Petra H ..... 191
Pelkonen Risto ..... 95
Perlmutter David H ..... 385
Phookan Gautam ..... 407
Pinkerton C Ross ..... 159
Poikolainen Kari ..... 381
Porawska Wieslawa ..... 265
Porkka Kimmo VK ..... 259
Putman Shannon B ..... 39
Pyörälä Kalevi ..... 317, 357
Pyrhönen Seppo ..... 227
Raitakari Olli T ..... 259
Rajamäki Allan ..... 79
Rantanen Virpi T ..... 151
Remes Kari ..... 79
Ressing Maaike E ..... 471
Ruuskanen Olli ..... 23
Rytömaa Tapio ..... 83
Ryynänen Markku ..... 131
Salaspuro Mikko ..... 195
Salmi Tuula A ..... 151
Salo Jarmo A ..... 305
Saraste Markku ..... 73
Schultz Susan K ..... 525
Sivula Arto ..... 95
Soimakallio Seppo ..... 69
St. Geme Joseph W III ..... 31

Steiner George ..... 357
Stevens Lynda K ..... 319
Strannegård Inga-Lisa ..... 395
Suonpää Jouko ..... 17
Syvälahti Erkka ..... 557
Syvänne Mikko ..... 335
Taimela Simo ..... 259
Tanska Seppo ..... 69
Taskinen Marja-Riitta ..... 335
Toes René EM ..... 471
Trimbos J. Baptist ..... 471
Tümer Zeynep ..... 121
Turner Robert C ..... 439
Uusitupa Matti IJ ..... 445
Vague Philippe ..... 371
Vainio Pauli ..... 131
Vandenberghe Elisabeth A ..... 137
Vermeulen Alex ..... 13
Vermorken Jan B. ..... 175
Jorma SA ..... 259
Vikkula Miikka ..... 301
Villikka Kirsti ..... 227
Virella Gabriel ..... 347
Virtanen Ismo O ..... 305
Vlassara Helen ..... 419
Vuorio Eero ..... 511
Wallace Ina F ..... 221
Wang Shi-Li ..... 319
Weinberg Jason B ..... 39
Wells Samuel A Jr ..... 401
Wennergren Göran ..... 395
Wiklund Tom ..... 311
Wilson David B ..... 1
Ylä-Herttuala Seppo ..... 89
Yudkin John S ..... 433